

Wealth, Rights, and Resilience: An Agenda for Governance Reform in Small-scale Fisheries

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The diversity of social, ecological and economic characteristics of small-scale fisheries in developing countries means that context-specific assessments are required to understand and address shortcomings in their governance. This article contrasts three perspectives on governance reform focused alternately on wealth, rights and resilience, and argues that – far from being incompatible – these perspectives serve as useful counterweights to one another, and together can serve to guide policy responses. In order to better appreciate the diversity in governance contexts for small-scale fisheries it puts forward a simple analytical framework focused on stakeholder representation, distribution of power, and accountability, and then outlines principles for identifying and deliberating reform options among local stakeholders.

Key words: Environmental governance; small-scale fisheries; wealth-based fisheries management; rights-based approaches; social-ecological resilience; policy reform.

1 Introduction

In the field of fisheries governance, for only the second time in the last fifty years, a boundary-spanning policy dialogue is under way that engages researchers, officials and development practitioners in many regions, who are focused on addressing the crisis of declining catches and incomes and rising costs in the world's fisheries. Several development agencies including the World Bank and the UK Department for

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International Development have demonstrated renewed interest in investing in fisheries for development (World Bank, 2004; DFID, 2005; Cunningham, et al. 2009; Leal, 2010), recognising not only the crisis but also the opportunity that improvements in fisheries could yield in promoting growth and reducing poverty in developing countries. As developing-country fisheries include a substantial small-scale or artisanal sector, which employs over 90% of the world's fisherfolk (World Bank/FAO/WorldFish 2010), the discussion inevitably concerns the role of small-scale fisheries, paralleling a debate on the role of small farms in agricultural development (Wiggins et al., 2010). Not since the 1980s has there been such a vigorous intellectual and policy debate that engaged fishery scientists alongside specialists in rural development and trade, environmental conservation, health and nutrition and institutional development and democratisation (for example, Bailey 1988; Platteau 1989). These past and recent multiple perspectives have enriched the debate over fisheries governance but, for many observers, have also made it more confusing.

Both the recent and the earlier debates have been strongly informed by a perception of lost opportunity in developing-country fisheries. The earlier debate was largely about making fishing more economically efficient, so that it contributed more to development and food security. This was to be achieved by applying the blueprints for structural adjustment and modernisation that were common in agriculture and natural resource-based development thinking at the time. In fisheries, this started with a diagnosis of artisanal fisheries as inefficient, fish markets as poorly developed and state interference in the fishery sector as misguided and ineffective. Rectifying this meant investing in boats, gear and processing technology, privatising state support services (ice plants, boat-building yards, fisheries training colleges), and supporting market consolidation and industrialisation. These were fundamentally attempts to improve small-scale fisheries that looked – to modernising eyes – technologically primitive, economically inefficient and largely ungoverned. Social scientists working on these fisheries at the time argued that artisanal fisheries could be innovative and were well fitted to the imperfect market and governance contexts they confronted. Managed through a combination of customary and state regulations – not always effectively – they were nevertheless able, in these challenging circumstances, to deliver benefits to poor and vulnerable people whose livelihoods depended on fish resources, similar to semi-arid rangelands and rain-fed farming systems in their production uncertainties (reviewed in Allison and Ellis, 2001; Jul-Larsen et al., 2003). The critique of modernisation and structural adjustment policies, and recognition of their limitations and undesirable effects on the poorest and most vulnerable, gave rise to a series of projects in the 1990s and 2000s that focused on strengthening fisherfolk's livelihoods and the markets and institutions in which they were embedded. These included the FAO/DFID Sustainable Fisheries Livelihoods Programme in West and Central Africa, which ran from 1999 to 2006 (Neiland and Bene, 2004; Allison and Horemans, 2006; Westlund et al., 2008) and the DFID Chars Livelihoods Programme in Bangladesh, which ran from 2004 to 2010 (Brocklesby and Hobley, 2003; Holmes et al., 2008; Hodson, 2009).

More recent debates have revisited the theme of economic inefficiency, but are now focused on addressing the inadequate rights of property over common-pool or

open-access resources, which result in diminished resource rents because of a combination of wasteful over-capacity and threats to productivity and sustainability from harvesting rates exceeding those commensurate with producing theoretical maximum economic yields (Cunningham et al., 2009; Leal, 2010). Once again, there is a call for governance reform, this time through reforming property rights within the fishery sector, rather than through the more generalised economic liberalisation and modernisation agenda of the 1980s, or the cross-sectoral, multiple-entry-point approaches of the livelihoods programmes of the 1990s and 2000s.

This article aims to sort through the main positions in these debates and distill an agenda for governance reform – not a standard package of solutions, but a set of principles for identifying and deliberating options among local stakeholders, recognising the vast diversity of institutional contexts that characterise developing-country fisheries. Our argument is two-fold. First, we argue that the diversity of social, ecological and economic characteristics of small-scale fisheries in developing countries needs context-specific assessments in order to understand and address shortcomings in governance. Second, we contrast three perspectives focused alternately on wealth, rights and resilience, and argue that, far from being incompatible, they act as useful counterweights to one another, and together can guide responses to the diversity of fishery-governance contexts. In particular, they keep us mindful as analysts and practitioners that a too singular focus on any one dimension – resource rents and economic opportunity, tenure rights and security, or risk and vulnerability – can lead us astray.

In order to better appreciate the diversity in governance contexts for small-scale fisheries development, we put forward a simple analytical framework focused on the elements of stakeholder representation, distribution of power, and accountability. Assessing these attributes of the governance context is key to setting the stage for a productive, contextually-grounded dialogue over reform options and pathways. We outline and illustrate nine principles to guide such reform efforts: (i) build inclusive, multi-stakeholder dialogue over reform goals; (ii) engage stakeholders in evidence-based analysis of the likely implications of competing reform options; (iii) support livelihood security and basic human rights; (iv) address cross-sectoral and cross-scale interactions; (v) strengthen bridging organisations; (vi) pursue complementarities between formal and informal systems of tenure and dispute resolution; (vii) when transferring decision-making and use rights, build corresponding mechanisms of accountability; (viii) enable and protect civil-society advocacy; and (ix) anticipate risks and opportunities and build adaptive capacity.

2 Crisis and opportunity

Commercial-capture fisheries are a direct source of livelihood for an estimated 120 million people, the vast majority of whom work in the small-scale sector, mostly in the developing countries of Asia, Africa, and Latin America (World Bank/FAO/WorldFish 2010; Mills et al., 2011). Recent estimates place the global value of commercial-capture fisheries at between \$250 and \$300 billion annually (World Bank/FAO/WorldFish,

2010). The nutritional and food-security benefits are even more significant. Fish products (including those derived from aquaculture) provide over 15% of per capita animal protein consumption for 2.9 billion people worldwide, and more than 50% in many West African, South-East Asian, and small island states (FAO, 2009). Also crucial are the follow-on gains from increases in income derived from the fisheries value chain, where women's roles are particularly important, in areas such as processing and trade (Weeratunge et al., 2010). Women's income gains from the sector, for example, are often reinvested in health, children's education, and new microenterprises (Kawarazuka and Béné, 2010). The potential economic gains from improved efficiencies in the capture fisheries sector generally (small-scale and commercial) have been estimated at over \$50 bn annually (Willman et al., 2009), and this is likely to be a minimum estimate – relating only to the value added if overfishing, production subsidies and illegal fishing are eliminated. It does not take account of the potential to add value from improved processing and trade, or the tourism revenue associated, for example, with recreational fishing (World Bank/FAO/WorldFish, 2010; Cisneros-Montemayor and Sumaila, 2010).

Recent research has clarified the web of development challenges facing small-scale fisheries in developing countries. The food-security crisis has seen more people enter fisheries for seasonal or supplementary income and nutrition, a sector already beset by over-capacity in most countries. Increased competition for fisheries resources is in many places driving down incomes and food security of the poorest households, which often lack decent alternative sources of livelihood (Allison et al., 2011). While fish products are the most valuable category of internationally traded food, poor households typically face substantial obstacles to participating in these production and trade value chains, and receive a small fraction of the benefits (Smith et al., 2010). Overfishing, combined with a range of other sources of environmental degradation, is causing declines in ecosystem productivity that threaten the longer-term viability of wild fisheries, and associated economic, livelihood and nutritional benefits (Pauly et al., 2005; Godfray et al., 2010). Particularly in freshwater and near-shore coastal systems, many of the most important environmental threats to the viability of small-scale fisheries come from outside the sector, including infrastructure development along rivers and coasts, industrialisation and pollution, and land-use change in agricultural and forest zones (Dugan et al., 2006, 2010; Molle et al., 2007).

Along with recognition of these multiple challenges, there is a growing body of evidence documenting the positive outcomes from a variety of tools and approaches applied to reforming fisheries governance in developing countries (Cunningham and Bostock, 2006). In a cross-regional analysis of 130 fisheries, Gutierrez et al. (2011) find not one but a *combination* of key factors that explain the positive performance of community-based co-management in ecological, social and economic terms. These include strong local leadership, robust social capital, individual or community quotas, and community-based protected areas, as well as effective enforcement mechanisms, long-term management policies, and fishers' influence in local markets. Analyses of the effectiveness of marine protected areas and gear restrictions are demonstrating benefits not only in the recovery of fish stocks but also in boosting fishers' incomes (Guidetti

and Claudet, 2010; McClanahan, 2010). Research is also documenting, beyond the immediate gains in incomes and nutrition for fishing families, the broader potential of small-scale fisheries as an engine for rural economic development and poverty reduction (Allison, 2005; Heck et al., 2007; Hilborn, 2007; Béné et al., 2010; Allison et al., 2011).

Yet the lessons from these experiences are not being scaled up and out at anywhere near the necessary pace. Against a background of increasing demand for renewable but finite resources, it is increasingly difficult, despite the documented cases of progress, to find examples of well-managed fisheries that are also sustainable in economic, ecological and social terms (Worm et al., 2009). The most significant obstacle to realising the development potential of small-scale fisheries does not lie in fisheries science, technology or finance, though there is work to be done in each of these areas. The emerging consensus in the international development community is that the most significant obstacle is governance. Yet while researchers, policy officials, and development practitioners from across the spectrum may agree that the governance challenge in developing-country fisheries needs solving, there remain a wide range of notions of what exactly this means, and what the goals, action priorities, and sequence of interventions for governance reform ought to be.

3 The governance context

In many countries, explicit policy goals for fisheries development are still framed in terms of production targets, even if the implicit goals – increasing government revenue, bolstering local or national food security, maintaining employment in a diverse coastal economy, or maintaining social stability – are more varied. When viewed from the perspective of local stakeholders, from participants in the sector such as fishers, processors and traders to competing users of water, land and forest resources, the diversity of goals is broader still. Our premise is that there is no single right answer to the appropriate balance of goals for fisheries development, and therefore for governance reforms that affect or target the fisheries sector. Critical instead is the *process* of arriving at goals considered socially legitimate by relevant stakeholders, informed by the best available scientific, economic and social analysis of the issues at stake and the likely outcomes of alternative courses of action (Andrew et al., 2007).

Historically, most analysts specialised in the sector have taken a fisheries-centric perspective, as if governance depends primarily or exclusively on fisheries-sector management institutions and policy (Andrew and Evans, 2011). Yet, for small-scale fishers in developing countries, the governance context affecting their livelihood opportunities often has as much or more to do with institutions, policies and patterns of decision-making outside the sector (Kooiman et al., 2005; Dugan et al., 2006; Jentoft, 2007; Mahon et al., 2008; Béné et al., 2009). This governance context is shaped by the need to respond to a set of ‘global drivers’ affecting all rural, natural-resource-dependent communities in developing countries, and not just fisherfolk. These include demographic change, democratisation and decentralisation, globalising markets for labour and food, fuel- and food-price increases, environmental change, epidemic

diseases, and international development policies and aid flows (Hazell and Wood, 2008; Hall, 2011).

Our approach adopts a broader perspective that accounts for governance responses that affect all aspects of people's lives, and not just their fishing activities. And while we are concerned in particular with the development potential of small-scale fisheries because of the dominant role these play in the livelihoods of poor households, and in the supply of affordable fish in domestic and regional markets in countries where malnutrition is prevalent, we recognise too that the fate of small-scale fisheries is often tied up with trends in the larger-scale, commercial sector, and that the governance challenge includes addressing trade-offs and linkages between the two.

4 Three visions for reform

A balanced approach to reform in fisheries governance should draw on insights from three perspectives that are often seen as contrasting or alternative pathways, grounded in an understanding of the particular governance context at hand (see Figure 1). In shorthand, we refer to these as the reform perspectives focused on wealth, rights and resilience. We choose these three from among a number of competing and overlapping frameworks, policy orientations and management tools and toolkits, because they have clear anchorages in wider development and governance theory and are influential in shaping policy in agriculture, forestry and water resource management, as well as fisheries (Leach et al., 1999; Johnson and Forsyth, 2002; Lebel et al., 2006). Influential fishery-sector tools such as 'ecosystem-based fisheries management' (de Young et al., 2008) or conceptual lenses such as 'interactive governance' (Kooiman et al., 2005) focus on technical and institutional mechanisms for achieving improved resource management but are not explicitly linked to the achievement of wider development goals outside the sector. The 'sustainable livelihoods approach' has been an influential means of moving natural-resource-sector approaches into more people-centred and cross-sectoral thinking and development action, but its influence has waned and its lessons are now largely subsumed within other less prescriptive frameworks (Scoones, 2009).

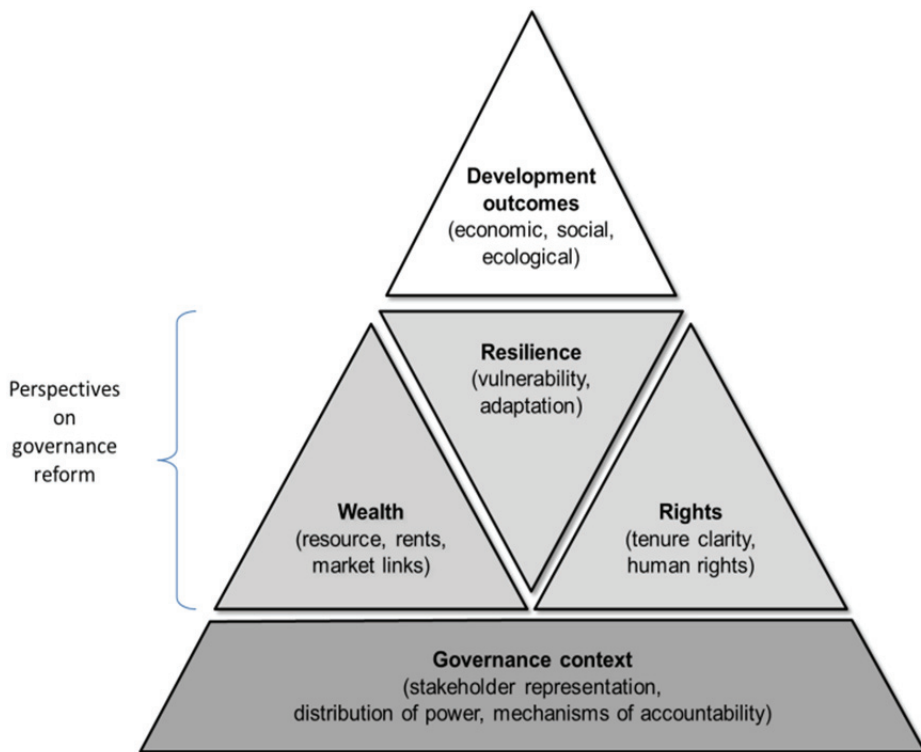
The 'rights-based approach' was the first of the three reform perspectives to gain prominence. As used by most advocates in the fisheries sector, the agenda focuses in particular on resource use and tenure rights, motivated by the observation that exclusive resource tenure provides users with incentives for both efficient economic exploitation and sustainable resource management (for example, WHAT, 2000; Arnason, 2008; Bromley, 2008; Scott, 2010). The insight regarding the pivotal role of tenure and tenure security is indeed critical, but in practice the emphasis that many advocates of the rights-based approach place on assigning individual private fishing rights prevents an even-handed consideration of the full range of tenure systems (individual and community-based, formal and informal, mixed) and management rules available (territorial versus catch-based regulation, gear restrictions, seasonal restrictions, and protected areas, for example). In particular, individual transferable quotas (ITQs), while effective with the right institutional support, are often impractical in developing-country

fisheries and may inadvertently undermine other development or welfare objectives (Ratner and Baran, 2008; Béné et al., 2010). Emerging experiences of successful fisheries governance using either private rights (individual transferable quotas), community rights, or state-managed marine protected areas (Costello et al., 2008; Gutierrez et al., 2011; McClanahan, 2010) reinforce the earlier views of common-pool-resource scholars that it matters less what kind of property-rights regime is in place, and more that it is adapted to the local ecological, economic and cultural context, is clear to all, is enforceable and has legitimacy (Ostrom, 1990; Hanna, 1999).

More fundamentally still, any attempt to reform property rights should consider the broader set of human rights for households dependent on small-scale fisheries (FAO, 2007; Charles, 2011; Allison et al., 2012). Where people suffer from inadequate nutrition, lack the most basic health services, are subject to forced child labour or violence by state and private actors, are systematically marginalised from public decision-making, or lack access to legitimate systems of justice, they are unlikely to put a priority on collective efforts at sustainable resource management, no matter how rational the system of property rights. Many of the most promising levers for promoting the rights of fishers and other participants in the aquatic agricultural economies lie outside the sector, where norms and standards in areas such as labour rights, child rights, women's rights, indigenous people's rights, and fair trade offer opportunities to directly address the most pressing needs of certain communities (Allison et al., 2012).

Recently, advocates of a perspective related to rights-based fisheries, the 'wealth-based approach,' have gained support in certain development-policy circles (DFID, 2005; Cunningham et al., 2009). The approach is motivated by another critical insight, namely, that inefficiencies in the sector have produced a major squandering of assets – and a development opportunity if the economic rents from fisheries are more rationally captured and reinvested in public goods. Yet advocates of this approach have not explicitly considered the important welfare functions of developing-country small-scale fisheries that would be affected by a reallocation of resource rights and rents. Also they have been silent on the institutional preconditions necessary to make such reforms equitable and to ensure that resulting revenues would indeed be reinvested in public goods such as health, education and rural roads, rather than captured by elites for their private gain (Wilson and Boncoeur, 2008; Béné et al., 2010). Yet the fundamental concerns of the wealth-based approach are sound: how to identify the unrealised wealth potential in the sector, how to channel that wealth in a way that contributes most effectively to poverty reduction, and how to create the incentives for sustainable resource management. In our view, the most suitable approach to reform of small-scale fisheries governance builds on and integrates insights from both the rights-based and wealth-based approaches, grounded further in an understanding of the social and ecological dynamics of the specific system at hand.

Figure 1: Three complementary perspectives on fisheries governance reform



The perspective of ‘social-ecological resilience’ provides this third pillar, focused on appreciating the sources of vulnerability and the capacity of linked social-ecological systems to respond to shocks and disturbances and adapt and recover while maintaining essential functions (Folke et al., 2005; Folke, 2006). Two elements of resilience thinking that are particularly pertinent to discussion of governance are the concepts of self-organisation and transformation. Self-organisation – the capacity of people and institutions to organise and reorganise as they adapt to change and surprises – is critical to building resilience (Berkes and Seixas, 2005; Mahon et al., 2008) and parallels strongly the thinking on rights and empowerment as means to achieve development outcomes (Hickey and Mohan, 2004). Resilience thinking recognises that maintaining desired system functions (such as food production) in the face of change may require the transformation of other elements of linked social-ecological systems. One example is the use of property-rights reform to address long-standing conflict or injustice over access to land and water. Such major shifts in social norms and policies can transform

the lives of marginalised and vulnerable groups of people and help maintain the resilience of linked social-ecological systems in which fisheries play an important role.

Appreciating the value of these three perspectives, however, does not in itself provide much useful guidance as to *how* to apply their insights in different contexts. For that, we need a simple and adaptable approach to analysing the diversity of governance contexts. In the terms we have used earlier (Andrew et al., 2007), analysis of the governance context is an essential component of the ‘diagnosis’ of small-scale fisheries and options for their development. The importance of diagnostic approaches to addressing complex social-ecological problems such as natural-resource management or poverty reduction is a prominent theme in contemporary development thinking: Ostrom (2007) urges diagnostic frameworks that identify solution-pathways ‘beyond panaceas’, while Rodrik (2006) and Collier (2008) urge appropriate sequencing of major types of development interventions (for example, peace-building, institutional development, macroeconomic reform, technology transfer) according to diagnosis of the ‘binding constraints’ on development in any given national and local context. In this diagnostic approach, the governance context is recognised as a key element of the ‘external environment’ in which fisheries operate. In the next Section we elaborate and specify the key elements in assessing governance characteristics, after which we outline our perspective on principles for governance reform.

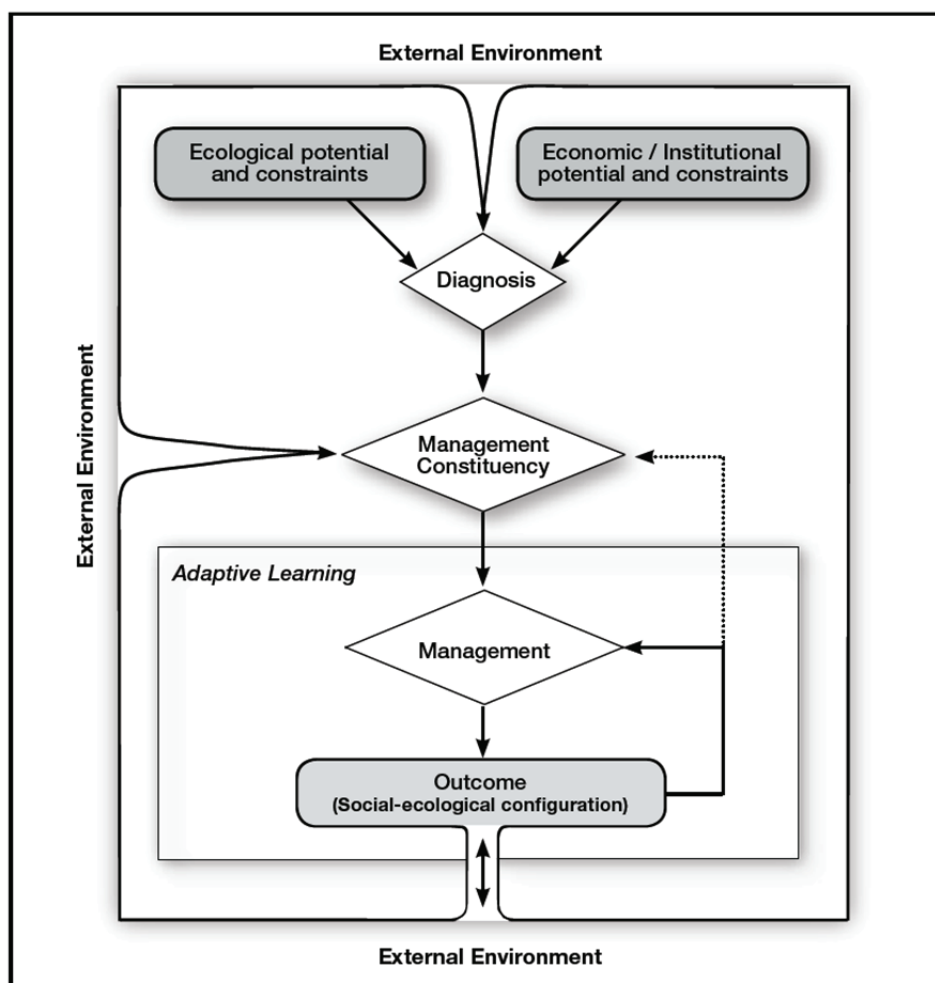
5 Analysing the governance context

Fisheries governance is often equated with management. Our view is broader: we consider that explicit efforts at resource management are set within a context of governance that managers (who may include the resource users themselves) may influence but never fully control. The governance context of fisheries management describes the domain in which people’s authority to use, manage, or otherwise influence fisheries resources is exercised. It concerns the formal legal and institutional framework as well as the informal sets of norms, traditions, social networks and power relationships that guide and constrain the interactions of stakeholders with one another and with the natural environment. This perspective accords with the distinction made by Oakerson (1992) between nested sets of rules affecting common-pool resource management, where ‘operational rules’ are the domain of management, while the external context structuring decision-making is the domain of governance. What Oakerson terms the ‘conditions for collective action,’ which we describe in Andrew et al. (2007) as the ‘management constituency,’ can be considered conceptually as the realm in which governance and management interact (see Figure 2).

In an industrialised country setting where democratic institutions are stable and well functioning, where the rule of law operates, and where management institutions are considered both legitimate and competent by resource users, this conflation of management and governance may not matter much. In such a setting, the performance of management institutions, those of the state as well as those of user groups, may well be the decisive factor in determining such outcomes as equity and sustainability in a fishery. In most of the developing world, however, such assumptions may not apply.

For these reasons, a realistic assessment of the broader governance context, not limited to fisheries-sector institutions, is especially critical in countries with weak democracies or socialist transition polities – where little about fairness, transparency or accountability can be assumed. Such a framework should provide a means for describing and assessing individual cases as well as systematically comparing multiple cases within and across regions.

Figure 2: A generic framework for diagnosis and management of small-scale fisheries



Source: Andrew et al. (2007)

The fisheries literature is rife with reference to norms of 'good governance' as an ideal, but short on critical analysis of governance in practice. We concur with the 'principles for sustainable governance' codified by Costanza et al. (1998), which include tying access rights to responsibilities for socially and ecologically sound management; matching resource-management authority to appropriate decision-making scales; and adopting adaptive management. We also have no objection to the principles of 'responsible governance' laid out by Sissenwine and Mace (2001), who argue, for example, that 'the fishing industry should govern itself to ... comply with regulations, avoid waste, and develop training to instill a responsible fishing ethic'. All stakeholders should be respectful of other stakeholders. The problem is that such admonitions to virtue are insufficient if they are not complemented by a hard-nosed analysis of what makes governance outcomes often go so wrong, despite good intentions on the part of many.

Existing guidelines on analysing the governance context for fisheries development have proved difficult to apply in practice. For example, the 'ecosystem approach to fisheries', codified in international norms under the auspices of the Food and Agriculture Organization, advocates understanding fisheries through a systems perspective, integrating consideration of ecosystem and institutional dynamics outside the fisheries sector, and aims at increasing the contribution of fisheries to poverty reduction (FAO, 1995; 2005). Yet, while the documented principles and guidelines for the ecosystem approach aim to encompass socio-economic dimensions (de Young et al., 2008), and work is under way to introduce assessment frameworks that integrate ecological, social and institutional factors (Garcia et al., 2008), practical guidance on how to analyse the governance context or to assess reform options remains underdeveloped. A more highly articulated effort is represented by research on the 'governability' of fisheries as complex social-ecological systems. This notion builds on the concept of 'interactive governance' (Kooiman et al., 2005; 2008), which conceives of governance as an emergent characteristic of social and political systems, created through the interactions of state agencies and a wide range of other civil-society, private-sector, and international actors. In the fisheries sector, 'governability' aims to characterise the degree to which complex problems of fisheries and development can be effectively managed by existing institutions (Kooiman and Chuenpagdee, 2005; Jentoft, 2007; Chuenpagdee and Jentoft, 2009; Jentoft and Chuenpagdee, 2009). The 'governability assessment framework' has so far tended to describe these 'governing interactions' in fairly abstract terms, and case-study applications are few (see Song and Chuenpagdee, 2010, however, for an early attempt). The framework is also burdened by a tendency to conceive of governance in normative terms, as 'the whole of interactions taken to solve societal problems and to create societal opportunities' (Kooiman et al., 2005: 17), and in so doing may lead analysts to overlook aspects of the exercise of power that have nothing to do with such beneficent ends.

Analysis of the governance context, we believe, should be aided by a conceptual framework that is critical rather than normative, and that lends itself quickly to practical insights. Looking beyond fisheries, the more general literature on environmental governance (Agrawal and Ribot, 1999; Ribot, 2002; WRI, 2003) offers a set of tools that have been widely tested and demonstrated to be useful in clarifying the diversity in

governance contexts. Adapting these tools of analysis to developing-country fisheries, we believe, should focus on three distinct dimensions of governance: stakeholder representation, distribution of authority, and mechanisms of accountability:

(i) *Stakeholder representation.* Which actors are represented in decision-making and how? Here we are concerned not only with decision-making regarding the fisheries resource but also the broader context of policy and implementation that influences the livelihoods of fishers and other local stakeholders. Particular attention needs to be paid to politically, economically, or socially marginalised groups, which may include the landless poor, female-headed households, internally displaced persons, ethnic minorities, etc.

(ii) *Distribution of authority.* How is formal and informal authority distributed with regard to decisions over resource access, management, enforcement, dispute resolution, and benefit-sharing? This includes authority regarding decisions over resource-tenure rules, taxation, and basin or coastal-zone planning, including transboundary arrangements if applicable. It also takes into account generic governance-reform trends, such as decentralisation, regional integration or market liberalisation. Issues of concern include clarity in the distribution of such authority (where inconsistencies and overlaps can be a source of conflict in their own right), the appropriateness of such distribution in equity and efficiency terms, as well as the capacity and adaptability of the institutions endowed with certain powers to execute them effectively.

(iii) *Mechanisms of accountability.* How are power-holders held accountable for their decisions and to whom? Accountability is measured in three directions: upward (towards higher-level authorities), horizontal (to stakeholders in other sectors or localities), and downward (to resource users and other community members). Questions of accountability apply equally to the exercise of public and private authority. Issues of concern include the degree to which actors are held accountable in practice, the relative strength of upward, horizontal, and downward accountabilities, and the transaction costs involved in keeping decision-makers accountable. Deficiencies are particularly common in downward accountability, as demonstrated through poor responsiveness on the part of state agencies or corporate actors to the interests of local communities, and in horizontal accountability, as demonstrated through ineffective integration of decision-making across sectors or horizontal inequalities among regional, ethnic or user groups.

For each of these dimensions, both formal and informal mechanisms typically function in parallel (see Table 1 for illustrations). In each case, the emphasis is on how decision-making works in *practice*, which may differ significantly from how it is meant to work in principle. In assessing mechanisms of representation, for example, formal mechanisms such as community representation in management committees or local or regional bodies of government need to be considered alongside informal mechanisms such as the communication of stakeholder interests through social networks or civil-society organisations. With regard to distribution of authority, it is critical to consider

both formally allocated authority as well as powers that have become assumed in practice. In some countries, for example, traditional civic or religious institutions may be involved in determining resource access or resolving environmental conflicts even if it is not their primary focus, and they may operate in parallel to the more formal bodies of village and district government. The role of traditional authority has been particularly prominent in Melanesia (Foale et al., 2011) and in Eastern and Southern African inland fisheries, often strongly linked to farming activities (Allison et al., 2002; Russell and Dobson, 2011). Sometimes these traditional institutions span large geographic areas, as with ethnic or trade associations such as the Bajau, or Sea Gypsies of South-East Asia, whose kinship and trade networks range from Thailand to Australia (Stacey, 2007), and the migrant Fante fishers of Ghana and Senegal, who range from Mauritania to the Democratic Republic of Congo (Overå, 2001). Traditional institutions may be recognised to a varying extent by government, and may be granted legal status, so the distinction between formal and informal is sometimes a matter of degree.

Table 1: Dimensions of the governance context affecting small-scale fisheries, illustrated with examples

	Formal mechanisms	Informal mechanisms
Stakeholder representation	Voting rights National and subnational parliamentary structures Political parties Requirements for public consultation and participation	Social networks Civil-society dialogue Mass organisations Trade associations
Distribution of authority	Area planning authority (for example, village development committees, coastal / basin authorities) Resource management rights and responsibilities specified in national law or regulations Legal tenure / resource access rights International accords & intergovernmental bodies	Resource users associations Customary resource-management institutions Customary tenure
Mechanisms of accountability	Enforcement by state agencies Rights to legal recourse Judicial process Legal protections for freedoms of expression, organising, etc. Enforcement & arbitration mechanisms in international accords	Civil-society advocacy Community enforcement Social sanctions Non-binding codes of conduct Voluntary certification standards Customary conflict resolution institutions Media Social movements

Similarly, with regard to mechanisms of accountability, formal channels such as the court system need to be considered alongside informal mechanisms such as civil-society advocacy and social movements. Compliance and enforcement with laws and local regulation may differ dramatically in practice, may be biased by the interests of government agencies, may be applied selectively to certain categories of resource users, or may be skewed according to class or ethnic or religious groupings. Historically, some informal enforcement mechanisms have functioned well at the community level, making enforcement by the state unnecessary (McCay and Acheson, 1987; Ostrom, 1990; Ruddle, 1988). Most commonly, however, such informal mechanisms are incapable of handling the range of users competing for commercially valuable fishery resources or the ecosystem threats that stem from other sectors of the economy. Similarly, voluntary certification standards as championed by industry groupings such as the Marine Stewardship Council, human-rights accords, or non-binding international norms such as the FAO International Code of Conduct for Responsible Fishing (FAO, 1995), represent useful points of reference if combined with other forms of collective action or property rights that uphold their application in practice.

6 Processes and principles for governance reform

When the governance context is conceived of as described above, it should be clear that it is impossible to replace one governance system for another wholesale. Because relationships of power and accountability are emergent, which is to say that they are shaped by the actions of a wide range of actors over time, even a state with highly centralised authority undertaking dramatic and systemic reforms will in practice be facing a mix of old and new norms. Therefore, when we speak of governance reforms affecting small-scale fisheries, we are speaking of partial changes to existing systems.

Reforms may be generalised in areas such as decentralisation, regional integration, human-rights legislation, environmental conservation, or trade policy, or they may aim explicitly at restructuring relations in the fisheries sector. While the literature on fisheries governance generally focuses exclusively on the latter type of reform (including the ecosystem-based, rights-based, and wealth-based approaches reviewed above), our contention is that both deserve attention in assessing opportunities for small-scale fisheries development. This means that we need to be looking at how the governance context can be influenced to affect fisheries management and the associated benefit streams, as well as how the livelihoods and vulnerabilities of fishery stakeholders can be addressed through more general improvements in governance that are not specific to fisheries.

The economic characteristics of a particular fishery also need to be considered in tandem with governance characteristics in assessing the suitability of various reform options. A wealth-based approach, focusing principally on more efficiently capturing and distributing the economic rent of a fishery, is most relevant where the resource is both economically significant and highly commercialised, which applies especially to larger off-shore marine fisheries serving primarily international markets, such as those

in Mauritania, Namibia, or Peru (FAO, 2006). It is less appropriate as the primary approach where resources are dispersed, the market value is smaller, and the fishery's role in local livelihoods and food security is more pronounced, which is the case for most inland and many coastal systems in developing countries. In a cross-regional review of successes in fisheries management, Hilborn (2007: 301) finds that

in countries with strong management infrastructure, this combination of top-down reduction in catches and proper incentives can work and has worked in quite a few fisheries in the US, Canada, Iceland, and Australia... In countries without strong central management structures, decentralisation and locally controlled dedicated access appears to be the best way to make the transition to biological and economic sustainability.

Also critical is the degree to which public revenue generated through such an approach is likely to be reinvested in public goods such as health, education, or environmental management – an outcome heavily influenced by broader mechanisms of public accountability (Grindle, 2007; Béné et al., 2010). Without such mechanisms in place, reform measures that support economic growth and private-sector development objectives may undermine local welfare and food security. In a recent study using national-level governance indicators from the World Bank, Smith et al. (2010: 784) raise an important cautionary note in their finding that 'countries with undernourishment and weak governance often serve as net exporters of seafood to well-nourished countries with strong governance'.

While it would be counterproductive to suggest a 'reform package' that should be implemented regardless of the country and local context, our reading of the experience to date with governance reforms in developing-country small-scale fisheries suggests the following principles to guide the identification and assessment of reform options. These principles draw on insights from the wealth-based, rights-based, and resilience-based reform perspectives surveyed in this article. They also orient analysts and practitioners alike to pay attention to the governance attributes outlined above – stakeholder representation, distribution of authority, and mechanisms of accountability – and to the changes in these attributes that various reform options entail. Equally important, they emphasise the interaction of representation, authority and accountability in the reform *process*.

(i) *Build inclusive, multi-stakeholder dialogue over reform goals.* Particularly where changes in government policy and law or support to reform efforts through official development assistance are concerned, explicit recognition of multiple goals and values of main stakeholder groups is key. Often some goals will be in competition, and there is no technical solution to reconcile these (Jentoft and Chuenpagdee, 2009); only meaningful engagement and deliberation among stakeholders can yield goals that will broadly be seen as legitimate. Fisheries reform efforts are most likely to yield improvements in equity when they are the result of democratic processes that include all key stakeholders (Robinson, 2010). Typically this will extend to and include

stakeholders outside the small-scale fisheries sector, because these compete for use of the same environmental resources for other ends, or they have a stake in benefit streams, or because they influence decision-making. Special attention may be required to ensure that non-economic values are considered. While sound goal-setting may seem obvious, it often fails to get adequate attention: one recent global review of countries' efforts to implement the Code of Conduct for Responsible Fisheries found that over half of the world's major fisheries lack clear management goals (Pitcher et al., 2009).

(ii) Engage stakeholders in evidence-based analysis of the likely implications of competing reform options. The role of research is to bring the best scientific and socio-economic analysis to the table, regarding the implications of different reform options as measured against a range of locally defined development goals. Gaining as much clarity as possible about the current distribution of economic gains derived from fisheries and the likely future distribution under various reform options is key, as is clarity about the assumptions that underlie this analysis. Simplistic solutions, while intellectually appealing, have been shown to fail when implemented without due regard for the broader social-ecological context and actors' incentives (Pitcher and Lam, 2010). Moreover, when centralised fisheries-management agencies draw on a narrow base of information, neglecting local ecological knowledge, they miss opportunities to transform stakeholder interactions and behaviours (Evans, 2010).

(iii) Support livelihood security and basic human rights as a precondition for local participation in longer-term resource-management efforts. Here the sequencing of reforms is key. Reforms that envision a transfer of resource rents from poor users to larger corporate actors, or that aim to consolidate and reduce the number of participants in small-scale fisheries, need to demonstrate a prior commitment to investing in livelihood diversification and redressing any gaps in basic rights among the groups most directly affected (Béné et al., 2010; Allison et al., 2012). Examples include efforts to secure rights for landless groups and ethnic minorities in Bangladesh (Jentoft et al., 2010) and investments in livelihood diversification in Vietnam as a component of the government's policy objective to reduce excess capacity in its small-scale coastal fisheries (Pomeroy et al., 2009). Fisheries reforms in post-apartheid South Africa have explicitly aimed to redress past violations of human rights as a key principle in allocating new resource rights in small-scale fisheries (van Sittert et al., 2006). Better linking improvements in fisheries governance with enhancement of rights and social development among fishing communities has recently emerged as a priority of the FAO as well (FAO, 2010).

(iv) Address cross-sectoral and cross-scale interactions. Given that the most significant risks and opportunities for the development of small-scale fisheries may lie outside the sector, employing levers of influence or capitalising on trends outside the sector may be beneficial. This includes areas such as trade policy, land and water management, environmental conservation, decentralisation, regional integration and public health. For example, integrating fisheries-management concerns into wetlands assessment and

planning is crucial, as some of the most productive fisheries in the world are found in shallow swamps, many of which are maintained through legislation and policy on water resources, land-use planning and biodiversity conservation (Springate-Baginski et al., 2009). In the Mekong River Basin, a new strategic environmental assessment on dam development includes detailed analysis of the ecological impacts on fisheries and the limitations of available mitigation technologies (Baran, 2010), to enable deliberation on the economic and social costs in relation to power generation and other benefits. In the Philippines, decentralisation reforms have provided a platform for co-management efforts that link actors in coastal fisheries management across multiple jurisdictions, integrating resource conservation and local economic development goals (Pomeroy et al., 2010). And in East Africa, the principle of a universal right to health is being used to gain support for the extension of sexual health services into fishing communities on the shores of Lake Victoria, where HIV prevalence is several times higher than the national average (Mojola, 2011). Where HIV prevalence is very high, local commitment to long-term resource governance may be lacking (Allison and Seeley, 2004), so health interventions are essential not only for immediate human welfare but also for the broader agenda of social-ecological resilience.

(v) Strengthen bridging organisations. Because of the critical roles they play in linking across sectors and geographic scales (Berkes, 2002), consider ways to support civil-society networks that enable the representation of poor small-scale fisheries stakeholders in broader development decision-making, and strengthen river basin or coastal zone management institutions in ways that improve horizontal accountability. Research on marine governance in Kenya, for example, has demonstrated the inadequacy of centralised decision-making agencies to integrate the knowledge and interests of dispersed coastal communities, and the need for institutional innovation to facilitate this bridging (Evans, 2010). In Cambodia's Tonle Sap Lake, the largest in South-East Asia, efforts to strengthen a national network of grassroots fisherfolk and increase their capacity to collaborate and negotiate with government authorities have recently helped to secure a formal transfer of access rights to fishing communities and to resolve access disputes that spanned provincial boundaries (Ratner et al., 2011).

(vi) Pursue complementarities between formal and informal systems of tenure and dispute resolution. Where traditional tenure regimes or dispute-resolution mechanisms retain legitimacy, they are often better complemented by formal regulation and law rather than replaced, provided that the interface between the two is clearly articulated. The locally managed marine area network (LMMAN) in the Pacific exemplifies the adaptability of traditional systems of tenure and dispute resolution, but also their vulnerability in the face of broader economic and market trends that not only increase demand for local fisheries resources but also bring competing claims on traditionally managed fishing grounds. Legal reforms associated with the establishment of marine protected areas (MPAs) have too often worked against local tenure and dispute-resolution systems, whereas the most successful reforms have instead buttressed local capacities in areas such as monitoring and enforcement (Ferse et al., 2010). A similar

principle holds in inland systems such as Lake Malawi, where centralised state institutions lack the capacity and, importantly, the legitimacy in the eyes of local stakeholders, to implement fisheries regulations. Meanwhile, traditional systems under local chiefs are culturally rooted, but risk elite capture. The most promising examples of progress are where formal, local representative management institutions collaborate with the traditional chiefs, and offer multiple avenues of recourse to local fisherfolk in clarifying resource claims and resolving disputes (Russell and Dobson, 2011).

(vii) When transferring decision-making and use rights, build corresponding mechanisms of accountability. Decentralisation of decision-making authority through generic governance reforms or specific fisheries co-management initiatives frequently proceeds with little regard to how newly empowered actors will be held accountable for their decisions, opening up opportunities for elite capture of benefits within local communities, sectoral agencies, or private rights-holders (Béné et al., 2009). Yet, the success of such initiatives depends on these mechanisms to a large degree, not only to encourage compliance with rules, but also to enable responsiveness and adaptation. In Uganda, for example, fisheries co-management institutions have been designed explicitly to share decision-making authority with previously marginalised groups, including women boat owners and crew labourers, in an effort to improve downward accountability (Nunan, 2006; 2010). In the spiny lobster fishery of Baja California, Mexico, strong co-management arrangements limit the catch, prevent encroachment, and maintain high earnings for co-operatives, which in turn motivates users to remain vocal in keeping the co-operatives accountable to their members (Defeo and Castilla, 2005).

(viii) Enable and protect civil-society advocacy. Advocacy by nongovernmental organisations or investigation by independent media may be necessary before the formal judicial process takes on cases against powerful stakeholders, or before a policy reform process is opened up to the participation of previously excluded groups. If general civil and political rights to free expression, popular organisation, and due process are not protected in practice, or if the rule of law itself is tenuous, this promises to undermine all other mechanisms of accountability, no matter how well designed. Activism over a twenty-five-year period by the South Indian Federation of Fishermen Societies, an umbrella organisation encompassing a diverse range of small-scale fishers organisations, has been pivotal in securing legal resource-use rights and access to markets, overcoming significant barriers to political participation based on caste and class (Kurien, 2005). In South Asia more broadly, advocacy for gender equity has also helped promote stronger community participation in fisheries governance (Weeraratunge et al., 2010). Civil-society networks in West Africa are likewise gaining importance in monitoring and reporting on illegal fishing and corruption in industrial fisheries, a major concern in terms of both social equity and human rights (Standing, 2008).

(ix) Anticipate risks and build adaptive capacity. Reform efforts are commonly observed to fail owing to problems of implementation rather than shortcomings in design or intent. But

the most successful reforms are those that anticipate a wide range of economic, social, political, institutional or environmental risks – as well as opportunities – and build in mechanisms to adapt (Armitage et al., 2009). Others are designed to deliver benefits under very modest assumptions about institutional capacity or effectiveness, or even in the case of a systemic breakdown in government services. Either way, the choice of reform options as well as the monitoring of reform implementation needs to evaluate consistently not only what outcomes will emerge if all goes well but, equally, how reform measures will affect the capacity of the most vulnerable groups to adapt and recover from future risks. This means that proponents of reform should avoid overconfidence in the effectiveness of governing institutions (Song and Chuenpagdee, 2010) and place a premium on learning through institutional experimentation. The coastal fisheries reform experience in Chile exemplifies such resilience principles. Reliable monitoring data alerted users to the decline in resource stocks; scientific studies provided the ecological information necessary to design appropriate interventions to sustain target species; and artisanal fishers had the scope to experiment with a range of management approaches, and draw from their successes when influencing national policies on user rights and responsibilities (Gelcich et al., 2010).

7 Conclusion

The agenda outlined in this article aims to bring together and build upon the insights of three diverse perspectives on the challenge of governance reform affecting small-scale fisheries. In shorthand, these are the perspectives focused on wealth, rights, and resilience. We have argued that, while different in emphasis, they are complementary and indeed, they serve as useful counterweights to one another. Too much emphasis on wealth creation and sectoral economic efficiency can ignore the welfare functions of fisheries and the trade-offs that may have to be made between increasing resource rents and sustaining displaced or excluded fisherfolk, or overlook the wider governance constraints that obstruct optimal efficiency of resource utilisation or reinvestment of revenue from the sector in public goods (Béné et al., 2010). Too much emphasis on improving access rights by the poor can overlook the potential for wealth generation and rural development from fisheries resources, and may not pay sufficient attention to the ecological limits of resource productivity (Cunningham et al., 2009). A preoccupation with minimising downside risks and vulnerabilities in the context of social-ecological resilience may divert attention from maximising opportunity, and particularly the ‘windows of opportunity’ that allow for positive institutional and policy reform (Folke et al., 2010). The principles for governance reform that we outline, building on a stakeholder-based process of dialogue that responds to the particularities of the local context, in effect militate against a too narrow application of any one of these reform perspectives.

While we have outlined process elements and principles for approaching governance reforms based on experience in a range of countries in Asia, Africa and Latin America, much more remains to be learned. We need, for example, more empirical evaluation of the livelihood, economic and ecological outcomes of past investments in small-scale fisheries reform in developing countries, including co-management initiatives, disaggregated

according to the costs and benefits they delivered to different social groups. Fisheries development programmes have paid insufficient attention to such impact assessment (Macfadayen and Corcoran, 2002). We need better valuation of the economic rents, subsidies and losses in particular fisheries and analysis of the trade-offs from different reform pathways, again in terms of the social distribution of costs and benefits. We need to assess more carefully parallels between fisheries wealth and the ‘resource curse’ well documented in other natural-resource sectors such as oil, minerals and high-value forests (Williams, 2011), and to identify how to avoid the regressive effects in terms of both equity and governance. We need better assessment of how alternative routes to market integration affect the livelihoods of poor households in the fisheries value chain, and the role of governance in influencing choices about market and trade policies in the sector. We need comparative analysis of the political economy of reform in developing-country small-scale fisheries, to learn more about the role of domestic coalitions and social movements, women’s rights, international civil-society and advocacy networks, research organisations and external development agencies in promoting positive steps towards improved governance.

In sum, the scope for learning is broad and deep. The pace of our collective progress at understanding and catalysing governance reforms in support of small-scale fisheries development depends on the collaborative efforts of researchers, policy officials, and development practitioners well beyond the traditional domain of the fisheries sector. By proposing a set of analytical criteria and principles for practice, we hope to accelerate the exchange of lessons needed to pursue this goal.

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